

CLAIMS:

1. A machine for cutting and edge folding foil, said machine including:
a cutting/folding station including a forming edge about which to fold the foil;
a feeding means for feeding a length of foil to the cutting and folding station;
5 and
cutting means to create a cut edge whereby the path of the cutting means is
such as to fold the cut edge around the forming edge.
2. The machine as claimed in claim 1 wherein the path of the cutting means is
spaced from the forming edge.
- 10 3. The machine as claimed in claim 1 or claim 2 wherein the path of the
cutting means is an arcuate path extending at least between a position forwardly
of the forming edge on one side thereof to a position at least partly on the other
side of the forming edge.
4. The machine as claimed in any one of the preceding claims wherein the
15 cutting means comprises a transversely extending blade which is pivotably
mounted.
5. The machine as claimed in claim 4 wherein a projection is provided which
extends from the blade on the infeed side of the blade.
6. The machine as claimed in claim 5 wherein the projection is spaced from
20 the cutting edge of the blade.
7. The machine as claimed in claim 5 or claim 6 wherein the projection is
elongate, extending continuously for substantially the transverse length of the
blade.
8. The machine as claimed in any one of the preceding claims wherein the
25 forming edge comprises a leading edge of a support means upon which a
predetermined portion of the length of foil is supported.

9. The machine as claimed in claim 8 wherein the support mean comprises a plate.
10. The machine as claimed in any one of the preceding claims wherein the feeding means comprises a pair of infeed rollers.
- 5 11. The machine as claimed in claim 10 wherein one of the infeed rollers has a compressible covering.
12. The machine as claimed in claim 11 wherein the other of the rollers has means for forming one or more embossments along the length of foil.
- 10 13. The machine as claimed in claim 12 wherein the other roller has circumferential ridges or grooves to form stiffening grooves or ridges in the foil.
14. The machine as claimed in any one of the preceding claims wherein the feeding means is adapted to dwell for a predetermined dwell period when the foil reaches the cutting/folding station.
15. The machine as claimed in claim 14 wherein the dwell period is sufficiently long to enable the cutting and folding to be performed.
- 15 16. The machine as claimed in claim 14 or 15 further including a drive means which is operably connected to the feeding means by a drive mechanism wherein the drive mechanism is such that the drive is temporarily suspended for the dwell period causing the feeding means to dwell for the predetermined time.
- 20 17. The machine as claimed in claim 16 wherein the drive mechanism incorporates a cam.
18. The machine as claimed in claim 16 wherein the drive mechanism includes two frictionally engaging cylindrical surfaces, one of which is discontinuous so as to cause interruption of the drive to the other cylindrical surface.
- 25 19. The machine as claimed in claim 18 wherein both of the cylindrical surfaces are external surfaces.
20. The machine as claimed in claim 18 wherein a first one of the cylindrical

surfaces is external and the second one is formed internally of a wheel having an outer rim which is discontinuous.

21. The machine as claimed in any one of claim 16 to 20 wherein the drive means is operably connected to the cutting means.

5 22. The machine as claimed in any one of claims 1 to 15 further including drive means having at least one rotating member, wherein one of the rotating members is provided with a first projection co-operable with the cutting means such that with each rotation of the rotating member, the cutting means is actuated.

10 23. The machine as claimed in claim 22 wherein the cutting means is pivoted to effect a cutting stroke and the drive means incorporates a crank arm having said first projection and the cutting means has a pivotable actuator having a second projection which is engaged by the first projection during a predetermined portion of the rotational path of the crank arm to actuate the actuator and pivot the cutting means.

15 24. The machine as claimed in claim 23 wherein the cutting means is biased to return after the cutting stroke.

25. The machine as claimed in any one of claims 16 to 24 wherein the drive means includes a motor.

20 26. The machine as claimed in any one of claims 16 to 24 wherein the drive means includes a manually operable crank handle.

27. The machine as claimed in any one of the preceding claims further including a pair of outfeed rollers downstream of the cutting/folding station wherein the outfeed rollers are driven at a faster rate than the feeding means.

25 28. The machine as claimed in claim 27 as dependent on any one of claims 16 to 21 wherein the outfeed rollers are driven from the feeding means to incur the dwell for the predetermined dwell period.

29. The machine as claimed in claim 27 or 28 wherein one of the outfeed rollers has a compressible covering.

30. The machine as claimed in any one of the preceding claims wherein the other of the outfeed rollers has circumferential ridges or grooves to form stiffening grooves or ridges in the foil, the ridges or grooves being arranged in spaced pairs to facilitate folding by the colourist.

5 31. The machine as claimed in any one of claims 10 to 13 further including a pair of outfeed rollers wherein the infeed rollers comprise first and second infeed rollers and the outfeed rollers comprise first and second outfeed rollers, the first infeed and outfeed rollers being mounted within a first housing portion and the second infeed and outfeed rollers mounted within a second housing portion, the
10 first housing portion being selectively separable from the second housing portion.

32. The machine as claimed in claim 31 further including adjustment means to twist the first housing portion relative to the second housing portion.

33. The machine as claimed in claim 31 or claim 32 further including a cradle which is pivotally mounted to the base of the second housing portion, the cradle
15 being to support a roll of foil.

34. A machine for cutting and edge folding foil, said machine including:

a cutting/folding station including a forming edge about which to fold the foil;

a folding means for feeding a length of foil to the cutting/folding station wherein the feeding means is adapted to dwell for a predetermined dwell period
20 when the foil reaches the cutting/folding station; and

cutting means for folding the cut edge about the forming edge, wherein the predetermined time is sufficient for the operation of the cutting means and the means for folding.

35. The machine as claimed in claim 34 wherein the cutting means comprises a
25 transversely extending blade which is pivotably mounted.

36. The machine as claimed in claim 35 wherein the blade is attached to a transversely extending rod which is pivotable about a longitudinal axis of the rod.

37. The machine as claimed in claim 35 or 36 wherein a projection is provided

which extends from the blade on the infeed side of the blade.

38. The machine as claimed in claim 37 wherein the projection is spaced from the cutting edge of the blade.

39. The machine as claimed in claim 37 or 38 wherein the projection is
5 incorporated into an elongate member of L-shaped section wherein a first portion of the L-shape lies against the infeed side of the blade and the second portion of the L-shape is in the form of a lobe projecting from the infeed side of the blade.

40. The machine as claimed in any one of claims 34 to 39 wherein the forming
10 edge comprises a leading edge of a support means upon which a predetermined portion of the length of foil is supported.

41. The machine as claimed in any one of claims 34 to 40 wherein the feeding means comprises a pair of infeed rollers.

42. The machine as claimed in any one of claims 34 to 41 further including a
15 drive means which is operably connected to the feeding means by a drive mechanism wherein the drive mechanism is such that the drive is temporarily suspended for the dwell period causing the feeding means to dwell for the predetermined time.

43. The machine as claimed in claim 42 wherein the drive mechanism incorporates a cam.

20 44. The machine as claimed in claim 42 wherein the drive mechanism includes two frictionally engaging cylindrical surfaces, one of which is discontinuous so as to cause interruption of the drive to the other cylindrical surface.

45. The machine as claimed in claim 44 wherein both of the cylindrical surfaces are external surfaces.

25 46. The machine as claimed in claim 44 wherein a first one of the cylindrical surfaces is external and the second one is formed internally of a wheel having an outer rim which is discontinuous.

47. The machine as claimed in any one of claims 42 to 46 wherein the drive

means is operably connected to the cutting means.

48. The machine as claimed in any one of claims 34 to 41 further including drive means having at least one rotating member, wherein one of the rotating members is provided with a first projection co-operable with the cutting means
5 such that with each rotation of the rotating member, the cutting means is actuated.

49. The machine as claimed in claim 48 wherein the cutting means is pivoted to effect a cutting stroke and the drive means incorporates a crank arm having said first projection and the cutting means has a pivotable actuator having a second projection which is engaged by the first projection during a predetermined portion
10 of the rotational path of the crank arm to actuate the actuator and pivot the cutting means.

50. The machine as claimed in claim 49 wherein the cutting means is biased to return after the cutting stroke.

51. The machine as claimed in any one of claims 34 to 50 further including a pair of outfeed rollers downstream of the cutting/folding station.
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52. The machine as claimed in claim 51 as dependent on any one of claims 42 to 47 wherein the outfeed rollers are driven from the feeding means to incur the intermittent drive.

53. The machine as claimed in claim 41 further including a pair of outfeed rollers wherein the infeed rollers comprise first and second infeed rollers and the
20 outfeed rollers comprise first and second outfeed rollers, the first infeed and outfeed rollers being mounted within a first housing portion and each of the second infeed and outfeed rollers mounted within a second housing portion, the first housing portion being separable from the second housing portion.

54. The machine as claimed in claim 53 further including adjustment means to twist the first housing portion relative to the second housing portion.
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55. A method of cutting and edge folding sheet material, said method including:
a) feeding a length of the sheet material to a cutting/folding station

which includes a forming edge about which to fold the sheet material;

- b) pausing the feed once a predetermined length of the sheet material has been fed;
- c) cutting the sheet material to create a cut edge; and
- 5 d) folding the cut edge about the forming edge wherein the pausing is sufficient for the cutting and folding to occur at the cutting/folding station.

56. The method as claimed in claim 55 wherein steps a) to d) are repeated to create a folded edge on a subsequent length of foil such that a finished piece of
10 foil is created by the cutting step on the subsequent length.

57. The method as claimed in claim 55 or 56 wherein the sheet material is foil.

58. A method of producing hair colourists' foils, the method including:

loading a roll of colourists' foil into a machine for cutting and edge folding foil;

15 operating the machine to provide one or more discrete foil sheets, each with a folded edge; and

disposing the machine in proximity to the colourist to enable direct access to the foils from the machine.

59. The method as claimed in claim 58 wherein the colourist loads and
20 operates the machine.

60. The method as claimed in claim 58 or 59 wherein the machine is manually driven by a rotatable crank handle.

61. The method as claimed in claim 60 wherein the machine is motor driven.